DECISION RECORD

Reference: Environmental Assessment (EA) for Grazing Authorization, NM-060-00-190

Comments from the New Mexico Natural History Institute, Forest Guardians, and the Wildlife Management Institute were received. Changes and clarifications as a result of these comments are as follows:

1. The 13 inch height requirement established by the interstate working group is misleading. This methodology is not measuring the total height of individual plants along the transect line as past research studies have done.. It is taking the average of four readings from 3 meters away. From one cardinal direction there may be sand bluestem 38 inches tall but from the other direction there may be very little vegetative obstruction and therefore not meeting the minimum 13 inches when divided by four. So these terms and conditions are not for the purpose of managing for unsuccessful nesting habitat conditions. See example attached.

2. An editorial change has been made - nighthawks are not raptors while great-horned owls and burrowing owls are.

3. An adaptive grazing management approach utilizing monitoring data on vegetative height/ structure is being taken on an annual basis instead of relying on precipitation data. Seasonal rest for pastures on rotational basis will be incorporated in a grazing plan.

Decision: It is my decision to authorize the issuance of a ten year grazing permit on the Marley Ranches Ltd grazing allotment #65051. The permit will authorize 250 AU's permitted use at 70% public land totaling 2100 AUM's. A rangeland use agreement will be developed and implemented allowing 219 AU's active use (1839 AUM's) and 31 AU's (261 AUM's) in voluntary non use from March 1 to the last day of February each year at 70% public land.

The reduction in numbers is due to the declining habitat conditions for the Lesser Prairie chicken within a portion of the allotment within the shinnery oak dune plant community. Along with the rangeland use agreement, a grazing management plan will be developed which will allow seasonal rest for pastures on rotational basis.

Any additional mitigation measures identified in the environmental assessment impacts sections of the referenced EA have been formulated into stipulations, terms and conditions

Terms and Conditions:

The following are terms and conditions specific to Lesser Prairie chicken pastures as outlined in the EA. Changes to these terms and conditions may be initiated by either party through the consultation coordination process.

1. Robel's vegetative monitoring methodology which has been approved by the five state Lesser Prairie Chicken Interstate Working Group will be implemented to measure lesser prairie chicken habitat requirements. Specific parameters include:

Shrub coverage - 25 to 30% composition of entire vegetative community.
Forb coverage - 10 to 15% composition of entire vegetative community.
Grass coverage - 60% composition of entire vegetative community; 10% with a visual obstruction reading (VOR) > or equal to 3.0 decimeters, an average VOR of 1.0 decimeter.

Note: It is important to understand that these parameters in certain pastures may not be met until the habitat has time to respond to the new grazing management practices. As long as improvement is being made in those pastures, then changes should not be necessary. If prairie chicken habitat requirements are not being improved as a result of livestock grazing practices, changes will be necessary.

2. Vegetative monitoring utilizing the Robel Pole will be conducted on an annual basis within those LPC pastures that are in question of meeting the habitat parameters. This range evaluation will be conducted between the BLM and the permititee. An adaptive grazing management approach will be taken to where annual changes in livestock numbers or use within pastures will fluctuate depending upon the range evaluation.

3. Additional livestock grazing management changes may be required as a result of periods of abnormal climatic patterns and the vegetative condition resulting from these climatic changes in cooperation and coordination with the permittee.

If you wish to protest this proposed decision in accordance with 43 CFR 4160.2, you are allowed 15 days to do so in person or in writing to the authorized officer, after the receipt of this decision. Please be specific in your points of protest. In the absence of a protest, this proposed decision will become the final decision of the authorized officer without further notice, in accordance with 43 CFR 4160.3. A period of 30 days following receipt of the final decision, or 30 days after the date the proposed decision becomes final, is provided for filing an appeal and petition for the stay of the decision, for the purposes of a hearing before an Administrative Law Judge (43 CFR 4.470.).

The appeal shall be filed with the office of the Field Office Manager, 2909 West Second, Roswell, NM, 88201, and must state clearly and concisely your specific points.

Signed by T. R. Kreager — 7/25/01
Assistant Field Manager — Date

ENVIRONMENTAL ASSESSMENT
for
GRAZING AUTHORIZATION

ON

ALLOTMENT 65051

EA-NM-060-00-190

November, 2000

U.S. Department of the Interior
Bureau of Land Management
Roswell Field Office
Roswell, New Mexico

Environmental Assessment for Grazing Allotment 65051

I. Background

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A. Introduction

When authorizing livestock grazing on public range, the Bureau of Land Management (BLM) has historically relied on a land use plan and environmental impact statement to comply with the National Environmental Policy Act (NEPA). A recent decision by the Interior Board of Land Appeals, however, affirmed that the BLM must conduct a site-specific NEPA analysis before issuing a permit or lease to authorize livestock grazing. This environmental assessment fulfills the NEPA requirement by providing the necessary site-specific analysis of the effects of issuing a new grazing permit on Allotment 65051.

The scope of this environmental assessment is limited to the effects of issuing a new grazing permit on Allotment 65051. Over time, the need could arise for subsequent management activities which relate to grazing authorization. These activities could include vegetation treatments (e.g., prescribed fires, herbicide projects), range improvement projects (e.g., fences, water developments), and others. Future management actions related to livestock grazing would be addressed in project-specific NEPA documents as they are proposed.

B. Purpose and Need for the Proposed Action

The purpose of issuing a new grazing permit would be to authorize livestock grazing on public range on Allotment 65051. The permit would be needed to specify the types and levels of use authorized, and the terms and conditions of the authorization pursuant to 43 CFR 4130.3, 4130.3-1, and 4130.3-2.

C. Conformance with Land Use Planning

Upon review of the Roswell Resource Management Plan/Environmental Impact Statement (Bureau of Land Management 1997), the proposed action was found to conform with the Record of Decision as required by 43 CFR 1610.5-5.

D. Relationships to Statutes, Regulations, or Other Plans

The proposed action and alternatives are consistent with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1700 et seq.); the Taylor Grazing Act of 1934 (43 U.S.C. 315 et seq.), as amended; the Clean Water Act (33 U.S.C. 1251 et seq.), as amended; the Endangered Species Act (16 U.S.C. 1535 et seq.) as amended; the Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.); Executive Order 11988, Floodplain Management; and Executive Order 11990, Protection of Wetlands.

II. Proposed Action and Alternatives

A. Proposed Action:
To authorize a grazing permit on the Marley Ranches LTD allotment # 65051 for 250 AU's (2100 AUMs at 70% public land). Specifically, to authorize a grazing permit for 250 cows from March 1 to the last day of February of each year at 70% public land, **and;**

Continue livestock management practices. These current practices consists of a 2 herd best pasture rest rotation system. The 2 herds are rotated through 6 pastures during the growing seasons. During the winter months 70 AU's are left to be rotated in those 6 pastures. The remaining AU's are relocated to private lands.

B. Change livestock management/numbers alternative:.

1. Reduction in numbers

Authorize the grazing permit for 250 AU's permitted use at 70% public land totaling 2100 AUM's.
Under this alternative a Rangeland Use Agreement would be developed and implemented allowing active use for 219 AU's (1839 AUM's) and 31 AU's (261 AUM's) in suspended use.

This reduction is based on the 2000 monitoring data and the livestock use agreement in 1995. Overall range condition has decreased from 48.33 in 1990, 47.0 in 1995 to 41.6 in 2000. Pounds per acre has decreased significantly while bare ground is increasing. Along with this reduction in numbers is the following terms and conditions to ensure lesser prairie chicken habitat parameters are achieved.

Terms and Conditions:

The following are terms and conditions are specific to this alternative for LPC pastures. Changes to these terms and conditions may be initiated by either party through the consultation and coordination process.

Robel's vegetative monitoring methodology which has been approved by the five state Lesser Prairie Chicken Interstate Working Group will be implemented to ensure that lesser prairie chicken (LPC) habitat requirements are met. Specific parameters include:

Shrub coverage - 25 to 30% composition of entire vegetative community.
Forb coverage - 10 to 15% composition of entire vegetative community.
Grass coverage - 60% composition of entire vegetative community; 10% with a visual obstruction reading (VOR) > or equal to 13.0 inches, with an average VOR of 4.0 inches.

Note: It is important to understand that these parameters in certain pastures may not be met until the habitat has time to respond to the new grazing management practices or reductions in numbers. As long as improvement is being made in those pastures, then changes should not be necessary. If prairie chicken habitat requirements are not being improved as a result of livestock grazing practices, changes will be implemented in cooperation and coordination with the permittee. In addition, livestock grazing management changes may be required as a result of periods of abnormal climatic patterns (severe drought or high precipitation) and the vegetative condition resulting from these climatic changes.

2. Removal of Public AUM's Alternative

Authorize the grazing permit for 250 AU's permitted use at 70% public land totaling 2100 AUM's. Under this alternative, the AUM's tied to the shinnery oak pastures (lesser prairie chicken habitat) on public lands that do not meet LPC habitat parameters, would move to suspended use. Since fragmentation of land status occurs within these pastures only the state and private lands AUM's would be authorized to graze in those pastures. Specifically to authorize allotment 65051 to run **190** AU's (1596 AUM's) active use and **60** AU's (504 UAM's) in suspension from March 1 to the end of February each year. The following pastures are considered lesser prairie chicken pastures. No public AUM's would be authorized for those pastures not meeting LPC habitat parameters, until such time **monitoring** data shows the area will support livestock grazing while maintaining lesser prairie chicken habitat.

LPC Pastures: Big Sand West, Big Sand East, Homestead and Red Tank.

Monitoring data from the spring of 2000 indicates that two LPC pastures (Big Sand East, Red Tank) are not meeting the height structure parameter needed for LPC nesting. See Robel Monitoring table under Special status species in the Affected Environment section. Therefore the reduction in AUM's mentioned above will come out of these two pastures. Red tank pasture and Big Sand East will only be authorized to run **9 AU's** (76 AUM's) from March 1 to the end of February each year.

The following are terms and conditions are specific to this alternative for LPC pastures. Changes to these terms and conditions may be initiated by either party through the consultation and coordination process.

Robel's vegetative monitoring methodology which has been approved by the five state Lesser Prairie Chicken Interstate Working Group will be implemented to ensure that lesser prairie chicken habitat requirements are met. Specific parameters include:

Shrub coverage - 25 to 30% composition of entire vegetative community.
Forb coverage - 10 to 15% composition of entire vegetative community.
Grass coverage - 60% composition of entire vegetative community; 10% with a visual obstruction reading (VOR) > or equal to 13.0 inches, an average VOR of 4.0 inches.

C. No Permit/Lease authorization alternative:
This alternative, if selected, would be to not issue a new grazing permit for the a Marley Ranches, LTD. allotment #65051. No grazing would be authorized on all of the federal land under this alternative..

III. Affected Environment

General Setting

Allotment #65051 is located in Chaves County, approximately 32 miles east of Roswell. The allotment is made up of 7 pastures and one trap, ranging in size from approximately 3 to 4 sections. This allotment consists of 10,695 acres of Federal land, 1,273 acres of State Land, and approximately 2,787 acres of private land. Currently this allotment is categorized as a "I" allotment.

The public lands within this allotment are for the most part landlocked by private and state lands. Public lands along highway 380 are open to the general public, but very few roads are available for use.

The Shinnery oak/dune (SOD) is the major plant community occurring within this allotment. The primary features in the SOD community are topography influenced by aeolian and alluvial sedimentation on upland plains forming hummocks, dunes, sand ridges and swales and the presence of shinnery oak.

This is a unique community type found primarily below the Llano Estacado or Staked Plains, in an area known as Mescalero Sands. It lies in the Canadian Plains and Southern Desert ecosystem between the elevations of 4,100 feet and 4,300 feet. The topography is gently sloping and undulating sandy plains, with moderate to very steep hummocky dunes of up to ten feet and more in height scattered throughout the area. Some of the dunes are stabilized with vegetation, while a number of them are unstable and shifting. Dune blowouts with shinnery oak and bluestem, either isolated or in dune complexes are common in this community. Annual precipitation for this region averages 12 -13 inches.

The following resources or values are not present or would not be affected by the authorization of livestock grazing on Allotment #65051; Prime/Unique Farmland, Cultural Resources, Native American Religious Concerns, Wild and Scenic Rivers, Hazardous Wastes, Water Quality, Floodplains, Areas of Critical Environmental Concern, and Minority/low Income populations.

Cultural inventory surveys would continue to be required for federal actions involving surface disturbing activities except where criteria to exempt surveys are met. Eligible and potential eligible sites would continue to be protected from damage or archaeologically treated to mitigate damage.

The impact of the proposed action and alternatives to minority or low-income populations or communities has been considered and no significant impact is anticipated.

A. Affected Resources

1. Soils: The two primary soil units on this ranch are the Faskin-Roswell association and the Roswell-Jalmar association.

Faskin - Roswell

Soils are 50% Faskin sandy clay loam, 30% Roswell loamy fine sand, and 20% less extensive soils. The Faskin soil is deep and well drained. Permeability of this soil is moderate, available water capacity is high, runoff is medium, water erosion is moderate, while the hazard of soil blowing is very high.

Roswell - Jalmar

Soils are 60% Roswell fine sand and 35% Jalmar fine sand. The Roswell soil is on hummocky sand dunes and the Jalmar soil is in depressional areas. Permeability of the Roswell soil is rapid, water capacity is low, runoff is slow, while the soil blowing hazard is very high. Permeability of the Jalmar soil is moderate, water capacity is moderate, runoff is slow, while the soil blowing hazard is very high.

2. Vegetation:

Vegetative monitoring studies were established in key areas on this allotment in 1980. Data collected at these study locations include plant production, ground cover, plant composition and key forage plant utilization data. Ecological (range) condition ratings were derived from the production study data. From 1980 - 1994 production data was collected 8 years, ground cover and plant composition data 4 years and utilization data 7 years (this data set was dropped in 1991). Allotment evaluations were done in 1980,1985,1990,1995 and 2000. Vegetative data presented in this environmental assessment are derived from the monitoring studies. Study data summaries are presented in tables.

One ecological (range) site exists on the public lands. The Sand Hills CP-2 range site is located within the SOD plant community and key vegetation is shinnery oak with bluestem and dropseed grasses. The deep sand community is a unique ecological area dominated by tall and mid-grasses. In many areas, the shinnery oak community has shifted from a dominant sand bluestem/little bluestem/hairy grama grassland with varying amounts of shinnery oak, sand sage and yucca to a community dominated by sand dropseed, red and purple three-awn and hairy grama, with increasing annual forbs, shinnery oak, mesquite, sand sage and yucca. Most of the public land within the allotment has had herbicide applications to treat shinnery oak. Most of this was completed in the early to mid 1980's. Bluestem species have responded well to those treatments.

The Desired Plant Community (DPC) as outlined in the Roswell RMP/EIS, established broad resource objectives for the Shinnery Oak Dune community. Allotment specific DPC's were left to be developed at the individual activity plan level.

While the RMP established the broad resource objectives for the various community types, it also provided that these objectives should be consistent with the capabilities of the particular ecological site.

Monitoring Data Summary, Allotment #65051							
Sand Hills CP-2 Ecological Site - West Big Sand pasture							
	Grasses	forbs*	shrubs	trees	litter	bare ground	rock
Percent composition of vegetative cover	68.46	.34	30.64	.56	N/A	N/A	N/A
Percent ground cover	11.54		13.22		31.57	43.67	0

Sand Hills CP-2 Ecological Site - Big Sand East pasture							
	Grasses	forbs*	shrubs	trees	litter	bare ground	rock
Percent composition of vegetative cover	60.16	.33	39.27	.22	N/A	N/A	N/A
Percent ground cover	3.61		15.05		22.48	58.41	0

Sand Hills CP-2 Ecological Site - Homestead pasture							
	Grasses	forbs*	shrubs	trees	litter	bare ground	rock
Percent composition of vegetative cover	72.97	2.07	24.41	.55	N/A	N/A	N/A
Percent ground cover	9.54		6.25		36.66	47.54	0

Sand Hills CP-2 Ecological Site -Red Tank pasture							
	Grasses	forbs*	shrubs	trees	litter	bare ground	rock
Percent composition of vegetative cover	58.18	1.00	40.65	.17	N/A	N/A	N/A

Percent ground cover	6.88	16.99	29.71	46.42	0

*Forb percentages are not accurately reflected due to collection techniques. On pace point monitoring, only perennial species are recorded.

The following table shows overall production

Production BY Study Year (lbs/Ac)						
Pasture	1981	1984	1988	1989	1995	2000
West Big Sand	363	1241	1889	1522	2298	1386
Big Sand East	362	476	819	1027	1046	763
Homestead	256	681	1953	1193	974	972
Red Tank	338	361	926	1068	927	780

Bluestem species and shinnery oak are important components of prairie chicken habitat and provide benefits to it's life cycle. The table below reflects this component in the present vegetative resource.

Average percent of Bluestem and Shinnery Oak Composition (Based on Long Term Monitoring Studies)									
Pasture	Composition - %			Ground Cover - %			Production - %		
	ANHA*	ANSC2	QUHA3	ANHA*	ANSC2	QUHA3	ANHA*	ANSC2	QUHA3
West Big Sand	10.02	28.74	28.59	1.72	6.30	12.11	6.78	42.37	26.78
Big Sand East	1.47	9.78	31.17	.33	1.00	12.53	4.44	7.98	50.19
Homestead	4.19	11.41	21.37	.92	2.14	4.00	5.25	14.91	47.31
Red tank	2.20	2.11	37.71	.78	.50	15.50	1.40	1.91	63.20

*

Includes ANGE - Big Bluestem, ANHA = Sand Bluestem, ANSC2 = Little Bluestem, QUHA3 = Shinnery Oak

The data used for this assessment is available at the Roswell Field Office.

3. Wildlife:

The Caprock Wildlife Habitat Area (WHA) includes the Marley Ranches Allotment (65051).

The Caprock WHA provides diverse habitat for more than 54 birds species, 33 species of mammals, and 36 species of reptiles and amphibians.

Raptors that are frequently associated with the vegetation types on this allotment are the red-tailed hawk, swainson's hawk, ferruginous hawk, roughlegged hawk, great-horned owl, burrowing owl, and the american kestrel.

Game bird species in this areas include the lesser prairie chicken, scaled and bob white quail, and the mourning dove.

Other bird species that are usually observed are the turkey vulture, roadrunner, chihuahuan raven, northern flicker, loggerhead shrike, common nighthawk, western meadowlark, western kingbird, pyrrhuloxia, horned lark, and other passerine birds.

At least 33 species of mammals occur on or utilize this allotment. The diversity of small mammals provide for an excellent prey base for carnivores such as the coyote, gray fox, bobcat, raccoon, badger, hooded skunk and striped skunk.

Mammals that provide a prey base include the black-tailed jack rabbit, desert cottontail, spotted ground squirrel, pocket mice, deer mouse, kangaroo rats, northern grasshopper mouse, harvest mice, and the white throated woodrat.

Two big game species that occur on the allotment are pronghorn antelope and mule deer.

Reptiles and amphibians that inhabit the area are the dune sagebrush lizard, southern prairie lizard, lesser earless lizard, side-blotched lizard, longnose leopard lizard, sixlined racerunner, tree lizard, skinks, western diamond back, western rattlesnake, coachwhip, spadefoot toads, western box turtle, and the yellow mud turtle.

4. Threatened and Endangered Species

Federal threatened, endangered and candidate species as well as state-listed threatened or endangered species potentially occurring within the proposed project area will be analyzed in this document. Candidate species and State listed species do not receive protection under the Endangered Species Act (ESA) until proposed. However, within the act and under BLM policy the bureau has an obligation to ensure actions do not contribute to the need to list these species. There are no known T/E species occurring on this allotment.

Special Status Species

<u>Dune Sagebrush Lizard</u>

The dune sagebrush lizard is listed by the New Mexico Department of Game and Fish as Endangered, Group 2 and by the U. S. Fish and Wildlife Service as a Category 2, Notice of Review species. The dune sagebrush lizard only occurs in the southeastern corner of New

Mexico and the western region of Texas. Within that range its habitat is restricted to active sand dunes and their peripheries (Degenhardt and Jones 1972). Shinnery oak is the dominate plant species that surrounds the top edge of the active sand dune, with a small composition of grasses inside the blowout area.

During 1991 a study was begun to examine the effects of the removal of shinnery oak on lizard habitat. Through five years of research it was demonstrated that there were 70%-94% fewer lizards in treated pastures as compared to non-treated pastures.

Lesser Prairie Chicken

Several years ago a petition was filed with the U. S. Fish and Wildlife Service (FWS) to list the prairie chicken as threatened. On June 1, 1998 the FWS announced a finding for the petition. After review of all available scientific and commercial information, the Service finds that listing this species is warranted but precluded by other higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants. The lesser prairie chicken is added to the Service's **candidate** species list.

In southeastern New Mexico, lesser prairie chickens exist in the shrub-dominated High Plains Bluestem Subtype by using mixed stands of tall grass and shinnery oak.

Male prairie chickens visit or establish booming grounds (leks) from early March to late May, with the peak booming activity occurring around the middle of April. Booming grounds can be found in mesquite shortgrass, shinnery oak grasslands, shinnery oak dunes, abandoned oil/gas pads, pipelines and roads. The basic requirement for lek sites is visibility of the immediate surroundings (shortgrass and topography).

Female prairie chickens prefer range in excellent condition for nesting. In areas of shinnery oak, nesting studies (Copelin 1963, Riley 1978) indicate that these birds prefer shinnery oak rangeland habitat dominated by mid and tall grass species. Wisdom (1980) demonstrated that nesting success was enhanced by the presence of tall, wide clumps of sand bluestem, which are found in a few near-climax areas in the shinnery oak-grassland, while areas devoid of sand bluestem were not highly conducive to nesting success. In areas where sand bluestem is scarce, little bluestem apparently serves as an acceptable substitute (Merchant, 1982). Riley et al. (1992) found that most successful nests occurred where basal composition of sand bluestem was greater and the height of vegetation above successful nests averaged 67 cm, while height of vegetation above unsuccessful nests averaged 35 cm. Copelin (1963) found that the most successful nests were placed between clumps of grass residue left from the previous year's growth that provided overhead cover.

Brooding areas are often within habitats which are in lower seral stages usually having a high proportion of bare ground and annual forbs (Riley et al. 1992, Jones 1963).

Food requirements vary among the seasons. Prairie chickens rely heavily (97%) on forbs and other green plant material during the spring and invertebrates in the summer. The early

fall diets consist of invertebrates and green plant material, while winter diets consist of mast from shinnery oak.

Above is a general description of prairie chicken habitat requirements. As with most wildlife species, especially upland game birds, precipitation plays a large role in population fluctuations and habitat conditions. Precipitation patterns have fluctuated drastically for the last twenty years. During the middle eighties precipitation was above normal and chicken populations responded very well. With the exception of two years, precipitation has been well below normal during the 1990's.

Population Monitoring Data

The Roswell Field Office has actively monitored prairie chicken booming grounds, population trends and habitat since the early seventies. Historically in New Mexico, the LPC occupied most of the eastern plains. However, numbers and occupied range of the species are much reduced; apparently in response to prolonged heavy grazing and brush control in combination with the great droughts of the 1930's and 1950's. It has been reported that currently the LPC occupies approximately one half their original range in New Mexico. Since the early 1970's LPC populations have fluctuated up and down with the highest period occurring during the middle 1980's. Within the proposed project area, there are six documented booming grounds that have been active at one time or other. During the middle eighties 5 out of the 6 leks were active and averaging 6.1 birds. Since 1993 very little lek activity has occurred.

LPC vegetation monitoring - Along with the standard pace point monitoring, the Robel Pole monitoring method is used to determine how much habitat is available for nesting habitat. The following is a table depicting the results of monitoring completed in the late winter/spring of 2000.

Robel Pole Monitoring - 2000 (VOR))			
Pasture	**# of Points > 13 inches**	**Overall Average in inches**	**Comments Meets requirements Y/N**
West Big Sand	**50 out of 75**	**18.58**	**Y**
Big Sand East	**4 out of 75**	**9.11**	**N**
Homestead	**27 out of 75**	**11.98**	**Y**
Red Tank	**4 out of 75**	**8.88**	**N**

***** minimum requirement is 10% above 13 inches and an overall average of 4 inches.

5. Livestock Management:

The allotment is grazed by cattle. Current allotment information reflects the present

livestock operation is a cow-calf and/or yearling operation with a herd of 250 cows yearlong. However, current operations may be at lower numbers due to the extreme dry conditions.

6. Visual Resources:

The allotment is located in a Class IV Visual Management Area. The Class IV rating means that contrasts may attract attention and be a dominant feature in the landscape in terms of scale. However, the changes should repeat the basic elements of the landscape.

7. Air Quality:

The allotment is in a Class II area for the Prevention of Significant Deterioration of air quality as defined in the federal Clean Air Act, which allows a moderate amount of air quality degradation. Air quality is generally good, Winds are typically southeasterly during the summer, and becoming southwesterly in the winter and early spring. Winds average 10 miles per hour in the fall and 16 miles per hour in the spring, with peak velocities reaching 50 miles per hour. These conditions rapidly disperse air pollutants in the region.

8. Recreation:

Recreational opportunities on the public lands are somewhat limited due to the limited vehicular access. The primary recreational activity occurring in this area is hunting. Mule deer, pronghorn antelope, and game birds such as quail and dove are taken during hunting seasons set by the New Mexico Department of Game and Fish. Off Highway Vehicle designation for public lands within this allotment are classified as “Limited” to existing roads and trails.

Cave/Karst - This allotment is located within a designated area of Low Karst or Cave Potential. At the present time, no known significant caves or karst features have been identified within this allotment. If at a later date, a significant cave or karst feature is found on public lands within this allotment, that cave or feature may be fenced to exclude livestock grazing and Off Highway Vehicle Use. A separate Environmental Analysis would be prepared to construct this exclosure fence.

IV. Environmental Impacts

Impacts common to all alternatives

Threatened and Endangered Species

No impact to federally listed species, since there are no known populations occurring .

Special Status Species:

Under all alternatives, there would be minimal impacts to the sand dune lizard due to the dispersal of livestock. Areas where there is a concentration of livestock (waterings and fence corners) the habitat may be of lower quality, but these areas are small in nature. Range improvements (pipelines) may enhance lizard habitat by creating open dunal areas that are usually bordered by shinnery oak.

Under all alternatives Visual resources will be managed to meet the Visual Resource Management (VRM) classes. All proposed management activities will be evaluated with regard to visual resource management and those projects that are compatible with the character of the natural landscape will be encouraged. No management actions should be proposed that would degrade visual quality to the extent that a change in any VRM class will result.

Air Quality: The impacts to air quality would not change from the current situation. A minor amount of air quality degradation would continue.

Recreation: Minimal impacts to recreational use are anticipated, since the public lands are limited in access. Public roads are not that extensive, but foot traffic is available.

Cave/Karst - No known significant caves or karst features are known to exist on the public lands within this allotment. Grazing would not affect the karst resources.

A. Impacts of the Proposed Action

1. Soils:

The permitted use as described in the proposed action may have an adverse impact above what would normally occur during a normal precipitation regime. However, the continued removal of vegetation at higher livestock numbers will continue to increase bare ground and cause soils to become more accessble to wind erosion.

2. Vegetation:

The continuance of the permitted use as described in the proposed action is not anticipated to have any adverse impact to the overall current vegetative conditions under a normal precipitation regime. However, the last ten years, have not been normal and a decrease in the overall plant diversity, vigor and production , has resulted from these dry conditions.

.3. Wildlife:

Domestic livestock will continue to utilize vegetative resources needed by a variety of wildlife species for life history functions within this allotment. The magnitude of livestock grazing impacts on wildlife is dependent upon the species of wildlife being considered, and it's habitat needs. In general, livestock stocking rate adjustments have been made in the past to minimize the direct competition for those vegetative resources needed by a variety of wildlife species. Cover habitat for wildlife will remain the same. Maintenance and operation of existing waterings will continue to provide dependable water sources for wildlife, as well as livestock.

Special Status Species:

Under the proposed action and drought conditions, negative impacts to the prairie chicken are likely to continue. Continued use of higher palatable grasses decreases the composition and height structure needed for LPC nesting.

5 Livestock Management:

Under the proposed action there would be no impacts to the current livestock management. The allotment would continue to be grazed in the same manner as it was prior to this springs management changes.

B. Impacts from the Change Livestock Management/ Numbers alternative #1

Under the this alternative, positive impacts would result in the long term to vegetation by bringing back the numbers in line with what is being produced.

Utilizing Robel's vegetative monitoring to ensure lesser prairie chicken habitat requirements outlined in the terms and conditions of this alternative are being achieved will have significant positive impacts to the lesser prairie chicken. Close monitoring of the structure and composition of vegetation will ensure that ample prairie chicken habitat is available each year. Allowing for flexibility and changing of livestock numbers and management during drought conditions will also benefit wildlife habitat.

Progress in achieving lesser prairie chicken habitat was made last summer when the permittee voluntarily reduced his livestock numbers by 60 head. The rate of progress for those pastures not meeting nesting habitat paramenters will be much slower under this alternative versus the reduction alternative described in alternative #2. However LPC habitat and vegetation is in adequate condition and will respond with the adjustments described under this alternative.

Livestock Management :

Under this alternative there would be reductions in the number of Animal Units and changes in grazing management. The allotment will continue to be run as a cow/calf operation.

B. Impacts from the Change Livestock Management alternative #2

Under the reduction alternative, short and long term positive impacts would result in vegetation by providing significant rest periods resulting in increased plant diversity and less bare ground.

This alternative would have a positive indirect affect on all resources except livestock management. (i.e., soils, vegetation and wildlife).

Utilizing Robel's vegetative monitoring to ensure lesser prairie chicken habitat requirements outlined in the terms and conditions of this alternative are being achieved will have significant positive impacts to the lesser prairie chicken. Close monitoring of the structure and composition of vegetation will ensure that ample prairie chicken habitat is available each year, and livestock will not be allowed until these habitat parameters are met.

Livestock Management:

Under this alternative significant reductions in the number of Animal Units and changes in grazing management would occur. The allotment will continue to be run as a cow/calf operation.
Rest rotations may be needed to ensure LPC habitat is being maintianed. This would require more involvement by the permittee ensuring livestock are moved at the appropriate times and that the water facilities are operational for livestock use. This alternative would also create a financial burden due to the reduction of AU's

C. Impacts of the No Livestock Grazing Alternative.

The No Livestock Grazing Alternative has been previously analyzed at the National level in the Rangeland Reform '94 EIS and in the Roswell RMP/EIS. An in depth analysis of this alternative will not be made in this document. General impacts under this alternative would include no new rangeland improvement and the removal of existing rangeland improvements unless a determination was made that they were beneficial to other uses. Since no grazing authorizations on public lands would be permitted, livestock operators grazing lands adjoining Federal lands would be responsible for preventing the unauthorized use of these Federal lands. The BLM would not fence these lands. Rangeland administrative emphasis would shift to issuing crossing permits to or from nonfederal land inholdings and resolving unauthorized use.

V. Cumulative Impacts

Under the proposed action there would be no change in the cumulative impacts since it does

not vary from the current situation.

Under the change livestock management and/or numbers alternative there would be positive changes in the cumulative impacts. Over time, with adequate precipitation, there would be a net gain in prairie chicken habitat through the implementation of a rest rotation grazing scheme. Livestock management facilities are anticipated to remain stable. Roads might increase if additional land development increased. Livestock would continue to graze the land.

VI. Residual Impacts

Under the proposed action, and alternatives there would be no change in the residual impacts.

VII. Mitigating Measures And/Or Permit/Lease Conditions

Under the proposed action and no grazing alternative no mitigating measures are required. Under the change livestock management and/or numbers mitigating measures outlined below may be required.

Under the proposed action, compliance with the grazing regulations (43 CFR Part 4100) will incorporated into the terms of the permit/lease.

VIII. Fundamentals of Rangeland Health

The fundamentals of rangeland health are basic components of healthy rangelands and guiding principles for the development of standards and guidelines for livestock grazing. The fundamentals are identified in 43 CFR §§4180.1 and pertain to watershed function, ecological precesses, water quality and habitat for threatened and endangered (T&E) species or other special status species. Based on the best available data and professional judgement, this EA addresses the fundamentals of Rangeland Health.

Field Office Staff Involvement/Review

John Spain - Rangeland Management Specialist
Rand French - Wildlife Management Biologist
Jerry Ballard - Outdoor Recreation Planner
Jim Schroeder - Watershed Specialist
Pat Flannary - Archeologist

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FINDING OF NO SIGNIFICANT IMPACT/RATIONALE

FINDING OF NO SIGNIFICANT IMPACT: I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined the proposed action and alternatives will not have significant impacts on the human environment and that preparation of an Environmental Impact Statement (EIS) is not required.

Rationale for Recommendations: The proposed action and alternatives would not result in any undue or unnecessary environmental degradation. The proposed action will be in compliance with the Roswell Resource Management Plan and Record of Decision (October, 1997).

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T. R. Kreager, Date
Assistant Field Office Manager - Resources